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Translation

07-01-04

PCT/CH2003/000218

PATENT COOPERATION TREATY



PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 26749WO-17	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/CH2003/000218	International filing date (day/month/year) 02 April 2003 (02.04.2003)	Priority date (day/month/year) 04 April 2002 (04.04.2002)
International Patent Classification (IPC) or national classification and IPC C03B 33/02		
Applicant BYSTRONIC MASCHINEN AG		

<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>6</u> sheets, including this cover sheet.</p> <p><input type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of _____ sheets.</p>	
<p>3. This report contains indications relating to the following items:</p> <p>I <input checked="" type="checkbox"/> Basis of the report</p> <p>II <input type="checkbox"/> Priority</p> <p>III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p>IV <input type="checkbox"/> Lack of unity of invention</p> <p>V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p>VI <input type="checkbox"/> Certain documents cited</p> <p>VII <input type="checkbox"/> Certain defects in the international application</p> <p>VIII <input type="checkbox"/> Certain observations on the international application</p>	

Date of submission of the demand 11 October 2003 (11.10.2003)	Date of completion of this report 01 July 2004 (01.07.2004)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

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## I. Basis of the report

## 1. With regard to the elements of the international application:\*

- ☒ the international application as originally filed
- ☒ the description:  
pages \_\_\_\_\_ 1-18 \_\_\_\_\_, as originally filed  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☒ the claims:  
pages \_\_\_\_\_ 1-19 \_\_\_\_\_, as originally filed  
pages \_\_\_\_\_, as amended (together with any statement under Article 19  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☒ the drawings:  
pages \_\_\_\_\_ 1/5-5/5 \_\_\_\_\_, as originally filed  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☐ the sequence listing part of the description:  
pages \_\_\_\_\_, as originally filed  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_

## 2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language \_\_\_\_\_ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

## 3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets/fig \_\_\_\_\_

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).\*\*

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

\*\* Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

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**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. Statement**

Novelty (N)	Claims	1-19	YES
	Claims		NO
Inventive step (IS)	Claims	1-19	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-19	YES
	Claims		NO

**2. Citations and explanations**

Reference is made to the following documents:

D1: EP-A-0 805 784  
D2: US-A-1 996 387  
D3: GB-A-1 201 094  
D4: US-A-1 922 327  
D5: EP-A-1 172 189.

1)

The present application satisfies the requirements of PCT Article 33(1) because the subject matter of claims 1-19 is novel within the meaning of PCT Article 33(2).

1.1)

The present application concerns vertically oriented glass plates which can be broken along break lines which extend horizontally during breaking. According to claim 1, this is achieved by providing a horizontal breaking device. According to the embodiment of page 6, lines 20-24, for example, this device comprises a horizontal breaking bar (42) with horizontal suction strips (39, 40).

Document D1, which can be considered the closest prior art, discloses only vertical breaking devices. In

particular drawing 2 of D1 shows that the first breaking station (3) (see, *inter alia*, the breaking strip (7) [reference sign 14 refers to the cutting bar]) and the other breaking stations (4, 8, 10) are oriented vertically. Therefore, unlike in the case of the device according to present claim 1 and the method according to present claim 13, the device disclosed in document D1 can divide a glass plate only if the break line extends vertically during breaking.

Independent claims 1 and 13 are therefore novel over document D1.

1.2)

Claims 2-11 and 14-19 are dependent on claim 1 and claim 13, respectively, and therefore likewise satisfy the PCT requirement for novelty.

1.3)

The system for processing glass sheets using the device according to claims 1-11 is therefore also novel.

2)

The present application meets the requirements of PCT Article 33(1) because the subject matter of claims 1-19 involves an inventive step within the meaning of PCT Article 33(3).

2.1)

With the device according to document D1 turning stations (5) and (9) are provided in addition to the vertical breaking stations (3, 4, 8, 10) so as to be able to rotate the glass plate about 90 degrees. Only once the glass plate has been turned in the turning station (5) can it be divided by the vertical breaking station (8) along the Y-

break line (see D1, page 4, lines 3-7).

In contrast thereto, the device defined in claim 1 and the method defined in claim 13 make it possible to break the glass plate along a Y break line directly, that is without prior turning. One of the advantages of this is that no turning station is required, processing times are cut since there is no need for turning and renewed alignment after turning, and the glass plate is simpler to manipulate such that there is less risk of damage (see the discussion of document D1 in the introductory part of the description (page 1, line 27, to page 2, line 7 and page 14, lines 16-25 of the description)).

In addition, neither document D1 nor documents D2-D5 make any mention of the above. In particular document D1 teaches that for breaking a glass plate the break line must also extend vertically. After division of the glass plate along the Y-break line it is turned 90 degrees so as to return the Z break line to a vertical position even though originally it already extended vertically in the cutting station (2). The teaching of document D1 therefore clearly leads away from the present solution.

Generally, document D1 does not, either alone or in combination with documents D2-D5, anticipate or suggest claims 1-19-

2.2)

Claims 2-11 and 14-19 are dependent on claim 1 and claim 13, respectively, and therefore likewise satisfy the PCT requirements for inventive step.

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3)

The device, the system and the method according to the application can be used for cutting glass sheets and hence claims 1-19 meet the requirements of PCT Article 33(4).